

CLAIMS

1. A welding assistance method for a user to exploit information available at a remote computer welding database in a contemplated welding operation, comprising the steps of:

- the user supplying an information request to a remote computer database, the information request comprising

(a) a first indication and/or selection by the user of a type of contemplated heat treatment process,

(b) a second indication and/or selection by the user of at least one type of technical problem to be solved arising or likely to arise during implementation of the contemplated heat treatment process, and

(c) a third indication and/or selection by the user of at least one parameter relating to a configuration of the contemplated heat treatment process;

- the database processing at least some of the first, second, and third indications or selections made by the user;

- after the processing step, the database supplying information relating to the contemplated heat treatment process as a proposal to the user of at least some information relating to at least one modification or at least one adjustment to be made to at least one configuration parameter of the contemplated heat treatment process so as to solve, at least partly, the type of technical problem supplied by the user in the second indication;

- the user receiving the information in the proposal;

- the user accepting the information in the proposal;

- communicating the user's acceptance of the information in the proposal to a computer as an authorization for the computer to act consistent with the accepted information in the proposal; and

5 - subsequent to the communicating step, the computer setting, modifying or adjusting at least one parameter of the welding operation of the contemplated heat treatment process based on the information proposal accepted by the user thereby solving, at least
10 partially, the type of technical problem supplied by the user.

2. Method according to claim 1, wherein the computer setting, modifying or adjusting of at least
15 one parameter of the welding operation is operated by acting on the heat treatment device or facility.

3. Method according to claim 1, wherein the type of the contemplated heat treatment process is from
20 the group consisting of cutting processes, welding processes, marking processes, heat spraying processes and combinations thereof.

4. Method according to claim 3, wherein an
25 indication or a selection of the contemplated heat treatment process is made by the user via an interactive computer interface.

5. Method, utilizing a remote welding
30 computer database, for determining, setting, adjusting and/or modifying at least one parameter of a heat treatment process, comprising the steps of:

- prior to beginning any heat treatment process, the user making a query to the database in the
35 form of

- a first indication and/or selection by the user of a type of heat treatment process to be implemented, and

5 - a second indication and/or selection by the user of at least one parameter relating to the configuration of the heat treatment process, that has to be or is likely to be adjusted, modified or set, before or during implementation of the heat treatment process of the first indication;

10 - the database processing of at least some of the first and second indications or selections made by the user;

15 - the computer providing a proposal to the user of at least some information relating to at least one modification or at least one setting to be made of at least the configuration parameter of the heat treatment process;

 - the user accepting the information provided by the computer as a proposal; and

20 - the computer setting, modifying or adjusting at least one parameter of the welding operation of the contemplated heat treatment process based on the information proposal accepted by the user.

25 6. Method according to claim 5, wherein the computer setting, modifying or adjusting of at least one parameter of the welding operation is operated by acting on the heat treatment device or facility.

30 7. Method according to claim 5, wherein the type of contemplated heat treatment process is from the group consisting of cutting processes, welding processes, marking processes, heat spraying processes and combinations thereof.

8. Method according to claim 7, wherein an indication or a selection of the contemplated heat treatment process is made by the user via an interactive computer interface.

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9. A welding assistance method for a user to exploit information available at a remote computer welding database in a contemplated welding operation, comprising the steps of:

10 - the user supplying an information request to a computer hosing a the database, the information request comprising

15 (a) a first indication and/or selection by the user of a type of contemplated heat treatment process,

 (b) a second indication and/or selection by the user of at least one type of technical problem to be solved arising or likely to arise during implementation of the contemplated heat treatment process, and

20 (c) a third indication and/or selection by the user of at least one parameter relating to a configuration of the contemplated heat treatment process;

25 - the database processing of at least some of the first, second, and third indications or selections made by the user;

30 - after the processing step, the database supplying information relating to the contemplated heat treatment process as a proposal to the user of at least some information relating to at least one modification or at least one adjustment to be made to at least one configuration parameter of the contemplated heat treatment process so as to solve, at least partly, the type of technical problem supplied by the user in the
35 second indication; and

- the user receiving the information in the proposal;

- the user accepting the information in the proposal; and

5 - a computer setting, modifying or adjusting at least one parameter of the welding operation of the contemplated heat treatment process based on the information proposal accepted by the user, said information proposal being completed by and/or combined
10 with user experience and/or user information, thereby solving, at least partially, the type of technical problem supplied by the user.

10. Method according to claim 9, wherein the
15 computer setting, modifying or adjusting of at least one parameter of the welding operation is operated by acting on the heat treatment device or facility.

11. Method according to claim 9, wherein the
20 type of contemplated heat treatment process is from the group consisting of cutting processes, welding processes, marking processes, heat spraying processes and combinations thereof.

25 12. Method according to claim 11, wherein an indication or a selection of the contemplated heat treatment process is made by the user via an interactive computer interface.

30 13. A method for allowing an improved remote control of a thermal welding or cutting process, device or facility by combining problem diagnostic with user's query comprising the steps of:

 (a) providing a remote computer database with
35 welding and/or cutting information;

(b) diagnosing or identifying a technical problem arising or likely to arise during the implementation of the welding or cutting process, or the use of the welding or cutting device or facility;

5 (c) the user supplying at least one information request to the database about said technical problem to be solved;

(d) the database processing said information request made by the user;

10 (e) after step (d), the database proposing to the user a modification, setting or adjustment proposal to be made to at least one configuration parameter of the welding or cutting process, device or facility;

(f) the user receiving the information in the
15 proposal of step (e);

(g) the user accepting the information in the proposal received in step (f); and

(h) a computer setting, modifying or
adjusting at least one parameter of the welding or
20 cutting process, device or facility based on the information proposal accepted by the user thereby solving, at least partially, the technical problem diagnosed or identified in step (b).

25 14. A method according to Claim 13, wherein, in step (g) in accepting the information in the proposal, the user adds further information based on user experience and/or user information.

30 15. A method according to Claim 13, wherein in step (b), the diagnostic or identification is made by the user or by the computer.

16. A method according to Claim 13, wherein in step (h), the computer setting, modifying or adjusting, by acting on the welding or cutting process, device or facility.